

REMARKS

The Office Action dated February 11, 2004 has been read and carefully considered and the present amendment submitted to make certain clarification to the claim language.

Claims 9-16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Pajerski *et al.*, U.S. Patent 4,697,661 in view of Hecker *et al.*, U.S. Patent 3,986,090. Accordingly, claim 9 has been amended to better define the present invention over the combination of those references.

With respect to the Examiner's comments at the middle of page 4 of the Office Action which referred to pages 6-8 of the Remarks section of Applicant's amendment filed December 29, 2003, it is submitted that there is difference between the feedback circuit and the push pull element control alleged "functions" or aspects of the present invention over the combination of Hecker *et al.* and Pajerski *et al.* In response to this, the Applicant has revised claim 9 so as to recite certain aspects in terms of more definitive structural terminology so as to further reflect the asserted novelty. By way of further response, the Examiner is respectfully requested to consider the following in regards to the substantive distinctions of the amended claims over the Hecker *et al.* and Pajerski *et al.* patents.

It is noted that, in making the above-referenced rejection, the Examiner has determined that Pajerski *et al.* does not disclose an amplification factor that is a function of the weight of the device, a feedback circuit and first and second preamplifier means, but that these elements are disclosed in Hecker *et al.* which allegedly teaches an amplification factor, a feedback circuit and first and second preamplifier means. However, the Applicant wishes to respectfully assert that amplification factor allegedly taught by Hecker *et al.*, at column 2, lines 4-8 and on column 4, lines 9-14 actually do not relate to a prior art motor drive for moving a part of an X-ray apparatus known from German Auslegeschrift DE-2104509 (DE'509). Specifically, in lines 9-23 of Hecker *et al.* recites that the "number of revolutions or speed of the motor and hence the velocity, at which it moves the image-forming section [is] determined by the manual force only so that the overall force produced to overcome the frictional forces (motor force + manual force) is smaller than the manual force alone of the user." Accordingly, Hecker *et al.* concludes that *the user is not really assisted by the servomotor drive* but that, on the contrary, *the user himself must produce the forces required for accelerating and*

*for overcoming the friction.* Moreover, the motor drive disclosed in DE'509 is used to raise and lower a part of an X-ray apparatus, but not for propelling the apparatus for horizontal movement. As such, the skilled person would simply not have been motivated to use the features of the device disclosed in DE'509 to propel a movable trolley.

Furthermore, even if column 4, lines 9-14 of Hecker *et al.* were related to an amplification, any teaching therefrom is only intended to relate to the provision of a movement which has a totally different purpose than the amplification factor used in the device of the present invention. The motor drive disclosed in Hecker *et al.* is at best, intended to raise and lower an image-forming section of an X-ray apparatus such that the amplification factor is useful only in providing a vertical movement, something which is in direct contrast to the inventive system, where the amplification factor provided is directed at providing a horizontal displacement of the X-ray apparatus as a whole, in response to the force exerted by the user on the push and pull elements.

With regards to the feedback circuit and the measurement of an electric magnitude, amended claim 9 reciting the feature that *each power amplifier is provided with a feedback circuit that measures a true value of the an electric motor current, said motor current being proportional to a torque of the electric motor.* This feature is supported in previous claim 9 and in lines 23-25 of page 7 of the original description of the present application. To this end, amended claim 9 makes clear that what is measured is the motor current itself directly as an electric magnitude, and not a mechanical magnitude that is then converted into an electric magnitude as it occurs, like that taught by Hecker *et al.*

The examiner has contended that the function of the feedback circuit of the present invention requires measurement of the motor torque converting that measured torque into current. Amended claim 9 makes it clear that it is not the motor torque that it is measured as a mechanical magnitude and then subsequently converted into an electric magnitude, but that it is the current, *i.e.* an electric magnitude that is directly measured and compared with the nominal value. Such a direct measurement of the true value of an electric magnitude is neither taught nor suggested in Hecker *et al.*

The examiner has also maintained that, the Hecker *et al.* patent teaches a "comparator means compares electrical magnitudes in the form of current that is proportional to the motor speed" (underlining added). Taking into account that the motor drive disclosed in Hecker *et al.* is intended exclusively to provide vertical movement of an image-forming section of an X-ray apparatus, the requirements of such a drive are completely different from those to which the device of the present invention is subject. Thus, in the motor drive of Hecker *et al.*, speed is the only parameter that needs to be controlled inasmuch the ascending/descending movement of the image forming section is not subject to any variations that could derive from obstacles that would require the torque of the electric motor be increased to overcome such obstacles. By direct contrast, the present invention is directed to a system which is moved on the floor and which is required to overcome obstacles such as ramps, uneven floor surfaces, small steps etc., and as such, the relevant parameter to be controlled is motor torque. No teaching whatsoever regarding the relevance of motor torque for horizontal movement can be found in Hecker *et al.*

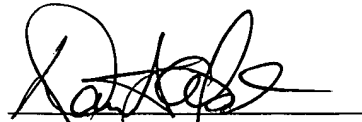
In addition to the above mentioned facts showing that combining Pajerski *et al.* with Hecker *et al.* would not result in the device of amended claim 9, the Applicant further maintains that it would anyway not have been obvious to combine the teachings of these references.

Specifically, and as stated above, the ascending/descending movements to be achieved by the motor drive disclosed in Hecker *et al.* are completely different from the backward and forward movements that might be achieved by the cart of Pajerski *et al.* Moreover, Hecker *et al.* is completely silent with respect to the existence of any possible purpose of the therein described motor drive, other than the ability to raise/lower an image-forming section of an X-ray apparatus (*i.e.* Hecker *et al.* is only teaches the performing a vertical movement.) There is no teaching whatsoever in Hecker *et al.* that would have motivated one skilled in the art to include such a motor drive to improve the performance of the cart taught by Pajerski *et al.* As such, the combination of Pajerski *et al.* with Hecker *et al.* simply would not have been obvious for one skilled in the art to try.

Moreover, even assuming arguendo that one skilled in the art would have tried to combine Pajerski *et al.* with Hecker *et al.*, the resulting combination would still have been a feedback circuit measuring only the speed of drive wheels, but not the electrical motor current as a parameter being proportional to the motor torque. Accordingly, any hypothetical combination that could result from Hecker *et al.* and Pajerski *et al.* would not have resulted in the present invention as defined in amended claim 9.

Accordingly, it is submitted that the differentiating features mentioned above show that claim 9 of the present application is patentable over Pajerski *et al.* in view of Hecker *et al* and, as all the remaining claims are dependent thereon, it is submitted that all of the claims in the present application are allowable over the cited references and an allowance of the present application is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'David A. Jackson', is written over a horizontal line.

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Encl.: Fee; Three Month Extension;  
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